

Safety Data Sheet

Potassium Metabisulfite food grade (E224)

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Version: 5.0

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(30042359/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Potassium Metabisulfite food grade (E224)

Recommended use of the chemical and restriction on use

Recommended use*: food additive(s)

Recommended use*: inorganic reducing agents; initial product for chemical syntheses; Chemical

Unsuitable for use: Not intended for sale to or use by the general public.

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

| | |
|--------------------|--|
| Molecular formula: | K(2)S(2)O(5) |
| Chemical family: | No data available. |
| Synonyms: | Dipotassium disulphite; potassium metabisulfite Use: Chemical; Food additive DISULFUROUS ACID, DIPOTASSIUM SALT |

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

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| | | |
|-----------------|---|--|
| Eye Dam./Irrit. | 1 | Serious eye damage/eye irritation |
| Aquatic Acute | 3 | Hazardous to the aquatic environment - acute |

Label elements

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318 Causes serious eye damage.

H402 Harmful to aquatic life.

Precautionary Statements (Prevention):

P280 Wear eye and face protection.

P273 Avoid release to the environment.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or physician.

Precautionary Statements (Disposal):

P501 Dispose of contents and container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

Labeling of special preparations (GHS):

Contact with acids liberates toxic gas.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

dipotassium disulphite

CAS Number: 16731-55-8

Content (W/W): >= 75.0 - <= 100.0%

Synonym: Disulfurous acid dipotassium salt

Sodium metabisulfite

CAS Number: 7681-57-4

Content (W/W): >= 0.0 - < 3.0%

Synonym: Disulfurous acid disodium salt; Disodium disulfite

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4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention. After inhalation of decomposition products: Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If on skin:

Wash thoroughly with soap and water

If irritation develops, seek medical attention.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Rinse mouth and then drink 200-300 ml of water. If symptoms persist, seek medical advice.

Most important symptoms and effects, both acute and delayed

Symptoms: allergic symptoms

Hazards: Risk of sulfur dioxide formation by reaction with gastric acid after swallowing.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

Sulphur dioxide,

The substances/groups of substances mentioned can be released if the product is involved in a fire.

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

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Further information:

Contaminated extinguishing water must be disposed of in accordance with official regulations. In case of fire and/or explosion do not breathe fumes.

Impact Sensitivity:

Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Ensure adequate ventilation. Avoid dust formation. Avoid contact with eyes.

Environmental precautions

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Methods and material for containment and cleaning up

Sweep/shovel up. Correctly dispose of recovered product immediately.

Avoid raising dust.

7. Handling and Storage

Precautions for safe handling

Use only in well-ventilated areas. Avoid dust formation.

Protection against fire and explosion:

The substance/product is non-combustible. No special precautions necessary.

Conditions for safe storage, including any incompatibilities

Segregate from acids and acid forming substances. Segregate from oxidants.

Do not store with: Sodium nitrate, sodium nitrite, sodium sulfide

Suitable materials for containers: rubberized, Polyester resin, glass reinforced (Palatal A410)

Further information on storage conditions: Keep in a cool place. Keep container dry. Keep container in a well-ventilated place.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

Sodium metabisulfite ACGIH, US: TWA value 5 mg/m³ ;

The substance mentioned develops if the regulation/notes for storage and handling are not observed.

Sulphur dioxide ACGIH, US: STEL value 0.25 ppm ;
 OSHA Z1: PEL 5 ppm 13 mg/m³ ;

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Advice on system design:

Provide local exhaust ventilation to control dust.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified acid gas/organic vapour/particulate respirator. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:

Wear chemical resistant protective gloves., Consult with glove manufacturer for testing data.

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Eye wash fountains and safety showers must be easily accessible. Wear protective clothing as necessary to prevent contact. Hands and/or face should be washed before breaks and at the end of the shift. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

| | |
|---|--|
| Form: | powder |
| Odour: | faint odour, of sulfur dioxide |
| Odour threshold: | Not determined due to potential health hazard by inhalation. |
| Colour: | white |
| pH value: | 3.8 - 4.6 (5 %(m)) |
| decomposition point: | approx. 150 °C Literature data. |
| Melting point: | The substance / product decomposes therefore not determined. |
| Boiling point: | not applicable |
| Flash point: | not applicable |
| Flammability: | not flammable not self-igniting (other) |
| Lower explosion limit: | For solids not relevant for classification and labelling. |
| Upper explosion limit: | For solids not relevant for classification and labelling. |
| Vapour pressure: | not applicable |
| Density: | 2.3 g/cm ³ (20 °C) Literature data. |
| Relative density: | 2.3 (20 °C) |
| Bulk density: | 1,100 - 1,300 kg/m ³ |
| Partitioning coefficient n- octanol/water (log Pow): | not applicable |
| Self-ignition temperature: | not self-igniting |

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| Thermal decomposition: | not self-igniting > 150 °C To avoid thermal decomposition, do not overheat. |
| Viscosity, dynamic: | not applicable |
| Viscosity, kinematic: | not applicable, the product is a solid |
| Particle size: | D50 228 µm (ISO 13320-1) |
| Solubility in water: | 495 g/l (25 °C) Literature data. |
| Evaporation rate: | The product is a non-volatile solid. |

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

| | | |
|-------------------------------|----------|--|
| Formation of flammable gases: | Remarks: | Forms no flammable gases in the presence of water. |
|-------------------------------|----------|--|

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Reacts with nitrites. Reacts with nitrates. Reacts with oxidizing agents.

Conditions to avoid

Avoid humidity.

Incompatible materials

acids, oxidizing agents, nitrites, nitrates, sulfides

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: Sulphur dioxide

Thermal decomposition:

> 150 °C

To avoid thermal decomposition, do not overheat.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

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Assessment of acute toxicity: Of low toxicity after single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Oral

Type of value: LD50

Species: rat

Value: approx. 2,300 mg/kg (BASF-Test)

Inhalation

Type of value: LC50

Species: rat (male/female)

Value: > 5.5 mg/l (OECD Guideline 403)

Exposure time: 4 h

Tested as dust aerosol.

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Dermal

Type of value: LD50

Species: rat (male/female)

Value: > 2,000 mg/kg (OECD Guideline 402)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion

Assessment of irritating effects: Risk of serious damage to eyes. Ingestion may cause irritation of the gastrointestinal tract.

Skin

Species: rabbit

Result: non-irritant

Method: BASF-Test

Eye

Species: rabbit

Result: Risk of serious damage to eyes.

Method: OECD Guideline 405

Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. A sensitizing effect on particularly sensitive individuals cannot be excluded.

Mouse Local Lymph Node Assay (LLNA)

Species: mouse

Result: Non-sensitizing.

Method: OECD Guideline 429

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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Aspiration Hazard
not applicable

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No known chronic effects.

Genetic toxicity
Assessment of mutagenicity: No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in a test with mammals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Carcinogenicity
Assessment of carcinogenicity: In long-term animal studies in which the substance was given in the drinking water in high doses, a carcinogenic effect was not observed.

Reproductive toxicity
Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Teratogenicity
Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Acutely harmful for aquatic organisms.

Toxicity to fish
LC50 (96 h) 460 - 1000 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EEC, C.1, static)
Nominal concentration.

Aquatic invertebrates
EC50 (48 h) 89 mg/l, Daphnia magna (Directive 79/831/EEC, static)
Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic plants
EC50 (72 h) 43.8 mg/l (growth rate), Scenedesmus subspicatus (Algal growth inhibition test, static)
Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to fish
No observed effect concentration (34 d) \geq 316 mg/l, Brachydanio rerio (OECD Guideline 210, Flow through.)

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The details of the toxic effect relate to the nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) > 10 mg/l, Daphnia magna (OECD Guideline 211, semistatic)

Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment of terrestrial toxicity

Study does not need to be conducted.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 aquatic

activated sludge of a predominantly domestic sewage/No observed effect concentration (180 min):
>= 1,000 mg/l

Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Inorganic product which cannot be eliminated from water by biological purification processes. Study scientifically not justified.

Assessment of stability in water

According to structural properties, hydrolysis is not expected/probable. Study scientifically not justified.

Bioaccumulative potential

Assessment bioaccumulation potential

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.

Study scientifically not justified.

Adsorption to solid soil phase is not expected.

Study scientifically not justified.

Additional information

Sum parameter

Chemical oxygen demand (COD): (calculated) approx. 140 mg/g

Other ecotoxicological advice:

Higher concentrations of the substance may cause a strong chemical oxygen consumption in biological sewage-treatment plants and/or waterways. The inhibition of the degradation activity of

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activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations. Do not discharge into drains/surface waters/groundwater.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

Food TSCA, US released / exempt

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

State RTK

NJ

PA

CAS Number

7681-57-4

7681-57-4

Chemical name

Sodium metabisulfite

Sodium metabisulfite

NFPA Hazard codes:

Health: 3

Fire: 0

Reactivity: 0

Special:

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Eye Dam./Irrit.

1

Serious eye damage/eye irritation

Acute Tox.

5 (oral)

Acute toxicity

Aquatic Acute

3

Hazardous to the aquatic environment - acute

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16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2022/10/17

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